

Salmonella spondylodiscitis and iliopsoas abscesses in a patient with HIV

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Introduction

The clinical association between spondylodiscitis and iliopsoas abscesses are commonly observed in Mycobacterium tuberculosis patients^{1,2}. Improved treatment of Mycobacterium tuberculosis has led to a decline in incidence, with Staphylococcus aureus now being the predominant organism responsible for 90% of cases³. Salmonella accounts for 0.45% of osteomyelitis cases, and psoas abscesses are rare. Herein, we report the case of a 37-year-old man with HIV.

Study Design

- We discuss the case of a 37-year-old HIV-positive patient who came to our hospital in May 2023, reporting fever and back pain. His medical history includes alcoholism and i.v. drug abuse. He tested positive for HIV in 2010 and was in Stage 3. He took TAF/FTC/BIC as part of his antiretroviral therapy (ART) on a regular basis. An MRI of the spine revealed a picture suggestive of diffuse muscle involvement and an abscess of the iliopsoas muscles, consistent with lumbar spondylodiscitis (L3-L4).
- Given the clinical condition of the patient and the results of the MRI images (Figure 1), we decided to investigate his case in order to understand the aetiology of the infection with a multidisciplinary approach.

Methods

- At the first access to our MD, the patient underwent to FNAB and had a L4 bone sample collection for microbiological investigation. A non-tuberculous mycobacterium: Mycobacterium abscessus was isolated during the initial microbiological analysis, but it was not confirmed from molecular analyses.
- Considering the laboratory results we treated the patient with an empiric therapy with cotrimoxazole and amoxicillin/clavulanic acid. Unfortunately, due to a cutaneous rash and pancytopenia the cotrimoxazole was stopped after just two weeks.
- Subsequently, the patient was counselled by the neurosurgeon, who ruled out any surgical treatment, and by the anaesthetist who recommended pain therapy.
- The patient was dismissed considering the improvement of his general clinical state and completed his treatment at home for a total of 8 weeks only with amoxicillin/clavulanic acid.

Results

- During the course of the treatment, the patient already began to show some improvements; indeed, muscular pains improved and the patient began to walk with less difficulty. In addition, the inflammatory picture (i.e. white blood cells, PCR, po-calcitonin) detected by laboratory analysis, at the time of his first admission, improved after the 8-week treatment.



Figure 1

Lumbosacral MRI with altered signal at L4 level

Methods II

- One month after the end of the antibiotic treatment, the patient went back to our MD for further check-ups as there was a reappearance of muscular pain and a worsening in walking.
- A new MRI was performed which showed partial regression of the bone inflammation at L3-L4, but increased involvement of the iliopsoas muscles and extension of the known abscess.
- Then, he underwent a new CT-guided sampling procedure from the left iliopsoas muscle with the drainage of a small amount of blood serum material and a contextual culture examination.

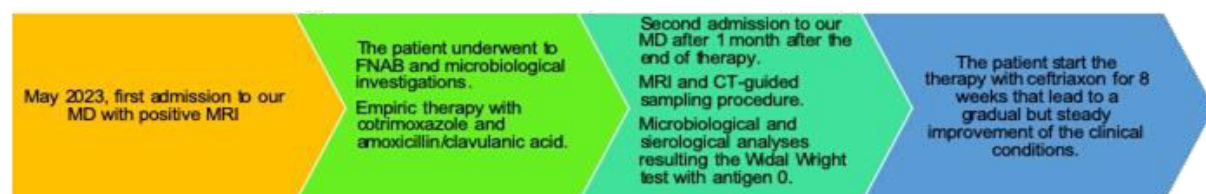


Figure 2

Flowchart of the entire diagnostic process used for our patient

Results II

- On the collected material, we performed culture tests for common germs, salmonella, microscopic research for BAR and DNA BK and for atypical mycobacterium. All of the above tests gave negative results.
- Given the negative findings of all the tests, we repeated the Widal Wright test with antigen O, which was negative on the initial admission but, at that time was positive (titre 1:320).
- Therefore, it was started the therapy with ceftriaxone for 8 weeks that lead to a gradual but steady improvement of the clinical conditions.

Conclusions

- This case was particularly interesting as it had no clinical or laboratory signs suggestive of a Salmonella Typhi infection (i.e. diarrhoea, nervous system disorders, fever).
- Salmonella typhi is considered an extremely rare cause of psoas abscess, both in immunocompetent and in immunocompromised hosts like HIV patients.
- Finally, our case reflects a particular clinical condition in that the patient showed non-specific symptoms. Furthermore, the results of the microbiology investigations did not guide the therapeutic choice as they were negative; on the other hand, the serological data were very suggestive for the choice of antibiotic therapy.

References

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